Alignment **.msf** am 4.2.2003

Visser Sequence X58453 compared to Seq. ID No.1 (AX 349063) of WO 02/02785

ClustalW 1.8 Parameters →fast pairwise alignment followed by multiple alignment	MView Parameters (output)
ktuple=2 topdiags=4 pairgap=5 gapopen=10 gapext=5 maxdiv=40 dnamatrix: IUB transitions: unweighted	
ruler: on coloring: identity threshold: 80 width: 50 consensus: off consensus coloring: identity consensus threshold: 100 consensus ignore: singleton consensus gaps: on consensus ref: 1 colormap: D_plain colorfile: -colorfile D_plain.map cons. colormap: -con_colormap D_plain	

Identities computed with respect to: (1) Visser-Seq

Colored by: identity + property

```
                  1 [          .         .         .         .         : 50
Visser-Seq 100.0%   AAGCTTTAACGAGATAGAAAATTATAATACTCCGTTTTGTTCATTACTTA
WO          45.5%   --------------------GTTTGGTTTCGCTGTTTT--TCATTTCCTT

                 51            .         .         .         .         1 100
Visser-Seq 100.0%   ACAAATGCAACAGTATCTTGTACCAAATCCTCTC-TCTTTTCAAACTTTT
WO          45.5%   TCTTCTTAAGGGGTAATACCAATGACAGTAATTCATATTGTGTAACAGTG

                101            .         .         .         .         : 150
Visser-Seq 100.0%   CTATTTGGCTGTTGACAGAGTAATCAGGATACAAAC-CACAAGTATTTAA
WO          45.5%   CGATT---CTTGTGCCA-----ATTATG-TACAATTTCTTTTGTAATTGT

                151            .         .         .         .         2 200
Visser-Seq 100.0%   TTGACTCATCCACCAGATATTATGATTTATGAATCCTCGAAAAGCCTAT-
WO          45.5%   TTGTTTCATGTTTTATTTCATTTTCTTTACTTTTTAGGGTAAAACCAATG

                201            .         .         .         .         : 250
Visser-Seq 100.0%   CCATTAAGTCCTCAT--CTATGGATATACTTGACAGTTTCTTCCTA-TTT
WO          45.5%   CCCCCAATTCATTCTACCTAACAGGGAAA-TT--CAGTTTTATACTAGTTT

                251            .         .         .         .         3 300
Visser-Seq 100.0%   GGGTTTTTTTTTTTCCTGCCAAGTGGAACGGAGACATGTTATGTTGTATA
WO          45.5%   CAGTTTTATTATTGTTTATTAAGTGT-------TTTTAGTTGGTTTT

                301            .         .         .         .         : 350
Visser-Seq 100.0%   CGGGAATCTCGTTAAAAAAAAAAAATACAATAGGAAGAAATGTAACAAACA
WO          45.5%   CTCATTTATGTGTATGCATGAATAT----TAGG--GGTGTGTG-------

                351            .         .         .         .         4 400
Visser-Seq 100.0%   TTGAATGTTGTTTTTAACCATCCTTCCTTTTAGCAGTGTATCAATTTT--
WO          45.5%   TGCGTGT-GTTAATATACA-CATAAGTATTA----TACACCCATTTTTG

                401            .         .         .         .         : 450
Visser-Seq 100.0%   --GTAATAGAACCATGCATCTCAATCTTAATACTAAAAAATGCAACAAAA
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WO   45.5%   CAGTCATAAAATTATGCA-----ATTTCAGTAC---AAATTGTGCGCAAA

                        451   .   .   .   .   5 500
Visser-Seq   100.0%   TTCTAGTGGAGGGACCAGTACCAGTACATTAGATATTATTTTTTATTACT
WO   45.5%   CTCTTCTT-------------------CATT---TTTTATTTTTTATTT-T

                        501   .   .   .   .   : 550
Visser-Seq   100.0%   ATAATAATATTTTAAT-TAACACGAGACATAGGAATGTCAAGTGGTAGCG
WO   45.5%   ATTTTCTTCTTTAAGGGTAATACCAATGATACTAATTT----ATGCCTCA

                        551   .   .   .   .   6 600
Visser-Seq   100.0%   GTAGGAGGGAGTTGGTTTAGTTTTTAGATACTAGGAGACAGA-ACCGGAG
WO   45.5%   TTTGGA---AATTTCGTTTTTGAAAATT-ATGCTAGTACACACTTATTCTTG

                        601   .   .   .   .   : 650
Visser-Seq   100.0%   GGGCCCATTGCAAGGCCCAAGTTGAAGTCCAGCCGTGAATCAACAAAGAG
WO   45.5%   TATATTATGGAAAAGCGCAATTT---------CTGTGTA-----------

                        651   .   .   .   .   7 700
Visser-Seq   100.0%   AGGGCCCATAATACTGTCGATGAGCATTTCCCTATAATACAGTGTCCACA
WO   45.5%   ----------AGTTTGTCATTCTGTATTT-----TTTTTCATTTTTC--

                        701   .   .   .   .   : 750
Visser-Seq   100.0%   GTTGCCTTCCGCTAAGGGATAGCCACCCGCTATTCTCTTGACACGTGTCA
WO   45.5%   --TTTCTTCTGG-AAGGGTAACACTAATGCCACTAA-TTCATTCTTG-CT

                        751   .   .   .   .   8 800
Visser-Seq   100.0%   CTGAAACCTGCTACAAATAAGGCAGGCACCTCCTCATTCTCACACTCACT
WO   45.5%   TAGAAAACTT-TAGTATTTTGATTGTGTTTTAGTTTTTATTTCATTTTGT

                        801   .   .   .   .   : 850
Visser-Seq   100.0%   CACACAGCTCAAC-AAGTGGTAACTTTTACTCATCTCCTCCAATT----A
WO   45.5%   TTCTTCTTTAAGGGAAATACCAA-TGCCACTAATCCATTCCATCTTAGAA

                        851   .   .   .   .   9 900
Visser-Seq   100.0%   TTTCTGATT-TCATGCATGTTTCCCTACATTC-TATTATGAATCGTGTTA
WO   45.5%   AATCTCTTTATCTTACAAAAA-CTCAACTTTTATATGCTTATTCGTGC-A

                        901   .   .   .   .   : 950
Visser-Seq   100.0%   TGGTGTATAAA-CGTTGTTTCATATCTCATCT-CATCTATTCTGATTTTG
WO   45.5%   TATTATAAAAAGCACAGTTTC-TATCTAAATTGCGTGCAAACT--TTATC

                        951   .   .   .   .   0 1000
Visser-Seq   100.0%   ATTCTCTTGCCTACTGTAATCGGTGATA-AATGTGAATGCTTCCTCTTCT
WO   45.5%   ATTAT-TTGTCTAAATTAATTTTTTTCTAGAATG---ATGATACCAATGCC

                        1001   .   .   .   .   : 1050
Visser-Seq   100.0%   TCTTCTTCTTCTTCTTCTTCTCAGAAATCAATTTCTGTTTTGTTTTTGTT
WO   45.5%   ACTAATTC-----ATTCCG-TGAGCACGCAATATGCGGAATG--------

                        1051   .   .   .   .   1 1100
Visser-Seq   100.0%   CATCTGTAGCTTGGTAGATTCCCCTTTTTGTAGACCACACATCACATGG-
WO   45.5%   CCTACGTATATTAGTGGTGTCGCATTTTTC----ATCTCTCA-CGCATGGG

                        1101   .   .   .   .   : 1150
Visser-Seq   100.0%   CAAGCATCACAGCTTCACAC-CACTTTGTGTCAAGAAGCCAAACTTCACT
WO   45.5%   CATGCATACC--CTACACATGCACACACACGCAT-ACACAACACATGAGC

                        1151   .   .   .   .   2 1200
Visser-Seq   100.0%   AGACACCAAATCAACCTTGTCACAGATAGGACTCAGGAACCATACTCTGA
WO   45.5%   ACTCACGCGAGCA-CATGCATACACCT-GTGCGCACACACACGACACCGA

                        1201   .   .   .   .   : 1250
Visser-Seq   100.0%   CTCACAATGGTTTAAGGGCTGTTAACAAGCTTGATGGGCTCCAATCAAGA
WO   45.5%   CACACAC-------GCACAGCCA-CATGCGTG-----CACTTAGAAAGA

                        1251   .   .   .   .   3 1300
Visser-Seq   100.0%   ACTAATACTAAGGTAACACCCAAGA-TGGC-ATCCAGA---ACTGAG-ACC
WO   45.5%   AAAAATAGACACGTAT-ACATTGGACTGGCTAGCTATACTACCGTGTAAC

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                    1301          .         .         .         .             : 1350
Visser-Seq 100.0%   AAGAG-ACCTGGATGCTCAGCTACCATTGTTTGTGGAAAGGGAATGAACT
WO          45.5%   ACTAGTACGTTGGTGTTGTACGACC-TATTTTCAGGT---GCCACAGACT

                    1351          .         .         .         .           4 1400
Visser-Seq 100.0%   TGATCTTTGTGGGTACTGAGGTTGGTCCTTGGAGCAAAACTG-GTGGACT
WO          45.5%   AGTATTTTCAGGCGACTGGCATATAGCCACGCCTATTGTTTCGTGTCGT

                    1401          .         .         .         .             : 1450
Visser-Seq 100.0%   AGGT-GATGTTCTTGGTGGAC-TACCACCAGCCCTTGCAGTAAGTCTTTC
WO          45.5%   AGGACGAAAACGGTCATATATGTGGCACTGGCC-TTCTAGAGACTCTCCA

                    1451          .         .         .         .           5 1500
Visser-Seq 100.0%   ATTTGGTTACCTACTCATTCATTACTTATTTTGTTTAGTTAGTTTCTACT
WO          45.5%   AGAGGCTCACCACCTCAC-CGTGAGTGACAGCCCACCGTC-GCGTAAACC

                    1501          .         .         .         .             : 1550
Visser-Seq 100.0%   GCATCAGTCTTTTTATCATTTAGGCCCGCGGACATCGGGTAATGACAATA
WO          45.5%   ACCGCA-----TTTA-CGTTT----CCCCG---ATCCGACAAAGCCAGGG

                    1551          .         .         .         .           6 1600
Visser-Seq 100.0%   TCCCCCCGTTA-TGACCAA-TACAAAGATGCTTGGGATACTAGCGTTGCG
WO          45.5%   CACGCACGTACGTGTCCATGTTGGCACGTGCGTGCGTCCCTCACGCGCCG

                    1601          .         .         .         .             : 1650
Visser-Seq 100.0%   GTTGAGGTACATCTTCCTATTTTGATA-CGGTACAATATTGTTCCCTTAC
WO          45.5%   GTTTGGCAGCACGTACGT-----GCTAGCTGTTCA----TA--CCAGAGC

                    1651          .         .         .         .           7 1700
Visser-Seq 100.0%   ATTTCCTGATTCAAGAATGTGATCCGCTACTTTATCTGCAGGTCAAAGTT
WO          45.5%   CGTACGTCAATCAAGCAAAAGA---GAAAAGAA----GGGGCGAAAGGT

                    1701          .         .         .         .             : 1750
Visser-Seq 100.0%   GGAGACAGCATTGAAATTGTTCGTT-TCTTTCACTGCTATAAACGTGGGG
WO          45.5%   G-ATACGCC--CGGCCGTGT-CGTCGTGCTGCAGACGAAGCAATCCCGGG

                    1751          .         .         .         .           8 1800
Visser-Seq 100.0%   ----TTGATCGTGTTTTTGTTGACC-ACCCAATGTTCTTGGAGAAAGTAAG
WO          45.5%   CCATGCAGCGCCATTGCCACGCCCCAGCGAAAAGCGAAGGCGAGAGCGAG

                    1801          .         .         .         .             : 1850
Visser-Seq 100.0%   TAAGCATATTATGATTATGAATCC-GTCCTGAGGGATACGCAGAACAGGT
WO          45.5%   --AGCACAC-ATG-----GCCCCCAGAACTGAAAGCGAGGGAGCACACGA

                    1851          .         .         .         .           9 1900
Visser-Seq 100.0%   CATTTTGAATATCTTTTAAC-TCTTA-CTGGTGCTTTTACT--CTTTTAA
WO          45.5%   GAAGGCGCGTGCGCGTGGACATCACAGCAGGAACACCCACCGGCAGCCCA

                    1901          .         .         .         .             : 1950
Visser-Seq 100.0%   GGTTTGGGGCAAAACTGGTTCAAAAATCTATGGCCCCAAAGCTGGACTAG
WO          45.5%   CCGGGCGGGCGCGGGCACGGACAAGAAG---ATGCGTGCACGGCGCGGC--

                    1951          .         .         .         .           0 2000
Visser-Seq 100.0%   ATTATCTGGACAATGAACTTAGGTTCAGCTTGTTGTGT-CAAGTAAGTTA
WO          45.5%   ---CGGCAACGGAAGGGGCGCGCCGCCGGCCGAGCGCACGCAA---A

                    2001          .         .         .         .             : 2050
Visser-Seq 100.0%   GTTACTTGTTATACTGTTGTCTTGATTTTTATGTG-GCATTTGTCTTTAA
WO          45.5%   GGCGCGTCGGCCAGCCACCGACGCCGCTGGAAAGCGCGCGCGGCG-----AA

                    2051          .         .         .         .           1 2100
Visser-Seq 100.0%   TCGTTTTTTTAACCTTGTTTTCTCAGGCAGCCCTAGAGGCACCTAAAGTT
WO          45.5%   CCGAGAATGTG-CCAGGCTGCCA---GCCGCTCC-GCGGTACCACTAGTC

                    2101          .         .         .         .             : 2150
Visser-Seq 100.0%   TTGAATTTGAACAGTAGCAACTACTTCTCAGGACCATATGGTAATTAACA
WO          45.5%   TCGTACGTGT-------GCCACT-CCACTCCGCTCCGCTCGGCACGCA-CG
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                            2151          .         .         .         .         2  2200
Visser-Seq 100.0%   CATCCTAGTTTCAGAAAACTCCTTAGTAT-ATCATTGTAGGTAATCATCT
WO         45.5%    CA-CGCAGG--CAGAAACAAACAAACAAACAAAAAAGTGGGTCATTCACT

                            2201          .         .         .         .         : 2250
Visser-Seq 100.0%   TTATTTTGCCTATTCCTGCAGGAGAGGATGTTCTCTTCATTGCCAATGAT
WO         45.5%    CCACTCAACGTCGCCTTTCAGGA--CGATG----CTTCGGTGCC--TTAA

                            2251          .         .         .         .         3 2300
Visser-Seq 100.0%   TGGCACACAGCTCTCATTCCTTGCTACTTGAAGTCAATGTACCAGTCCAG
WO         45.5%    -GACACCTACCTTTGTGTCTATGACATGTGAGCCCAA-----CAGATGGC

                            2301          .         .         .         .         : 2350
Visser-Seq 100.0%   AGGAATCTATTTGAATG--CCAAGGTAAAATTTCTTTGTATTCACTTGAT
WO         45.5%    TGGCCCACATGTCAGTGATCCAAAGGCAGGTGCCTTTAAAG-CACCGAA-

                            2351          .         .         .         .         4 2400
Visser-Seq 100.0%   TGCGCTTTACCCTGCAAATCAGTA-AGGTTGTATTAATAAATGATAAATT
WO         45.5%    ---GCTGCGTCCCGCCTTTCATTACACGGGCCATGCATGCGGGTGCG---

                            2401          .         .         .         .         : 2450
Visser-Seq 100.0%   TCACATTGCCTCCAGGTCGCTTTCTGCATCCATAACATTGCCTACCAAGG
WO         45.5%    TGCCGTCCCGTCTAGG---CGTTCGGTGTCCGGCCGCGTGCATGC-ATGC

                            2451          .         .         .         .         5 2500
Visser-Seq 100.0%   CCGATTTTCTTTCTCTGACTTCCCTCTTCTCAATCTTCCTGATGAATTCA
WO         45.5%    ACGAGGAGCGGAG-CGGAGCGGG-----------TATTGGGGATCCAGCCA

                            2501          .         .         .         .         : 2550
Visser-Seq 100.0%   GGGGTTCTTTTGATTTCATTGAT-GGGTATGTATTTAATGCTTGAAATCA
WO         45.5%    CCGGA-----GGACTG-AGCGAGCGGGCGAGTAC----------AAATAA

                            2551          .         .         .         .         6 2600
Visser-Seq 100.0%   GACCACCAACTTTTG--AAGCTCTTTTGATGCTAGTAAATTGAGTTTTAA
WO         45.5%    CCCCACTCACCGGAGCCCACGCACCGTTCGT-----TTCCTTGAGTCCCGT

                            2601          .         .         .         .         : 2650
Visser-Seq 100.0%   AAATTTTGCAGATATGAGAAGCCTGTTAAGGGTAGGAAAATCAACTGGAT
WO         45.5%    CACTTTCGCCC----------GCCCGCCCCACACACTACAACCAGGAGCCT

                            2651          .         .         .         .         7 2700
Visser-Seq 100.0%   GAAGGCTGGGATATTAGAATCACATAGGGTGGTTACAGTGAGCCCATACT
WO         45.5%    CGAT-CTGCCAGTGAAGAAGAAGA-AGG-------ACACTCA-CGAATGCC

                            2701          .         .         .         .         : 2750
Visser-Seq 100.0%   ATGCCCAAGAACTTGTCTCTGCTGTTGACAAGGGTGTTGAATTGGAC--A
WO         45.5%    CGGCCGGCGACTGTCAGTACGCTCCCGTCCAGGAACAAGAAGAAGAAGAA

                            2751          .         .         .         .         8 2800
Visser-Seq 100.0%   GTGTCCTTCGTAAGACTTGCATAACTGGGATTGTGAATGGCATGGATACA
WO         45.5%    GAAGCAGAACAAGAAGAAGCAGAA---GAAGACATCAGACCAGGTACGCA

                            2801          .         .         .         .         : 2850
Visser-Seq 100.0%   CAAGAGTGGA-ACCCAGCGACTGACAAATACACAGATGTCAAATACGATA
WO         45.5%    CGAACGTATATAGTCAG-GCCGGCCCAGTTCCCGGCCGCCGG--ACGATG

                            2851          .         .         .         .         9 2900
Visser-Seq 100.0%   TAACCACTGTAAGATAAGATTT--TTCCGACTCCAGTATATGCTAAATTG
WO         45.5%    GAT--------AGATC-GATTTAGTTCGGTCTCAAATCAAGGTCGGTTGG

                            2901          .         .         .         .         : 2950
Visser-Seq 100.0%   TTTTGTATGTTTATGAAATTAAAGAGTTCTTGCTAAT--CAAAATCTCTA
WO         45.5%    TCTAGTA-GTAGAT------AGA---TCCATCCAAATGCCGCCATGTTGT

                            2951          .         .         .         .         0 3000
Visser-Seq 100.0%   TACAGGTCATGGACGCAAAACCTTTACTAAAGGAGGCTCTTCAAGCAGCA
WO         45.5%    TAGATC-CAGAGTCTCTTCCTTTTTACTTAAAGA---TCG-CGAGCGTAA

                            3001          .         .         .         .         : 3050
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Visser-Seq 100.0%    GTTG--GCT-TGCCTGTTGACAAGAAGATCCCTTTGATTGGCTTCATCGG
WO         45.5%    GTTGAGCATCTTCCTATAGATTCGTAGAT-----TTAAA--ATCAT--G

                3051        .         .         .         .     1 3100
Visser-Seq 100.0%    CAGACTTGAGGAGCAGAAAGGTTCAGATATTCTTGTTGCTGCAATTCACA
WO         45.5%    TAAAAATTAAAA--AAAAAGATTTAAAA--TCATGTA-CTGC---TAGCT

                3101        .         .         .         .       3150
Visser-Seq 100.0%    AGTTCATCGGATTGGATGTTCAA-ATTGTAGTCCTT--GTAAGTACCAAA
WO         45.5%    AGG--ATGGATTTCTATGTGAACGATCTTAGATCTGCGGAACAGATCCAA

                3151        .         .         .         .     2 3200
Visser-Seq 100.0%    TGGACTCATGGTATCTCTCTTGTTGAGTTTACTTGTGCCGAAACTGAAAT
WO         45.5%    TGGATTCATGG--CCGGCCTAG----GGTTAATTACGACTAGACAGAGGC

                3201        .         .         .         .     : 3250
Visser-Seq 100.0%    TGACCTGCTACTCATCCTATGCAT--CAGGGAACTGGCAAAAAGGAGTTT
WO         45.5%    AG-CATAATGCGCG-CATAAACATTTCTGTTTTCTAGCC-----GAGTTG

                3251        .         .         .         .     3 3300
Visser-Seq 100.0%    GAGCAGGAGATTGAACAGCTCGAAGTGTTGTACCCTAACAAAGCTAAAGG
WO         45.5%    GATCA-A-------ACAGGTC-AGGTCACCCACC---------AAGG

                3301        .         .         .         .       3350
Visser-Seq 100.0%    AGTGGCAAAATTCAATGTCCCTTTGGCTCACATGATC-ACTGCTGGTGCT
WO         45.5%    CTTTG---ATTTTTGTTTGTTTTTGGCGTGGGCGTTCCACTGC------

                3351        .         .         .         .     4 3400
Visser-Seq 100.0%    GATTTTATGTTGGTTCCAAGCAGATTTGAACCTTGTGGTCTCATTCAGTT
WO         45.5%    -ACCCTA--------CAGAACAAATT----CCATTT---CTCAGCCAGTT

                3401        .         .         .         .       3450
Visser-Seq 100.0%    ACATGCTATGCGATATGGAACAGTAAGAACCATAAGAGCTTGTACCTTTT
WO         45.5%    CCACCCCGTGC--------------ACGCGATTTAACAGCTTATTAATTAC

                3451        .         .         .         .     5 3500
Visser-Seq 100.0%    TACTGAGTTTTAAAAAAAGAATCATA-AGACCTTGTTTTTCCGTCTAAAGT
WO         45.5%    TACC-AGTGCGGAGACA-CGTTCATATATACTCTGGT----CATGTTAATT

                3501        .         .         .         .     : 3550
Visser-Seq 100.0%    TTAATAGCCAACT-AAATGTTAC-TGCAGCAAGCTTTTCATTTCTGAAAA
WO         45.5%    TGGATTTCAAATTCAAATGTAAAATCCAGAAAACTTGA-----CTGCAAA

                3551        .         .         .         .     6 3600
Visser-Seq 100.0%    TTGGTTATCTAATTTTAACATAATCACATGTGAGTCAGGTGCCAATCTGT
WO         45.5%    TT------CTGGTTT--ACTTCACTAC-------TCAC-TAACAATCAGT

                3601        .         .         .         .       3650
Visser-Seq 100.0%    GCA-TCGACTGGTGGACTTGTTGACACTGTGAAAGAAGGCTATACTGGAT
WO         45.5%    GCAGTCGTCT-------CTTGCTG-C--------AGGTAGCCACAC----

                3651        .         .         .         .     7 3700
Visser-Seq 100.0%    TCCATATGGGAGCCTTCAATGTTGAAGTATGTGATTTTACATCAATTGTG
WO         45.5%    --CCTGCGCGCGCC----ATGGCG--------------------G

                3701        .         .         .         .     : 3750
Visser-Seq 100.0%    TACTTGTACATGGTCCATTCTCGTCTTGATATACCCCTTGTTGCATAAAC
WO         45.5%    CTCTGGT-CACGTCCCAG-CTCGCCACCTCCGGCACCGTCCT-CAGCGTC

                3751        .         .         .         .     8 3800
Visser-Seq 100.0%    ATTAACTTATTGCTTCTTGAATTTGGTTAGTGC--GATGTTGTTGA-CCC
WO         45.5%    ACCGACAGATTCCGGCGTCCAGGTTTTCAGGGCCTGAGGCCCCCGGAACCC

                3801        .         .         .         .     : 3850
Visser-Seq 100.0%    AGCTGATGTG-CTTAAGATAGTAACAACAGTTGCTAGAGCTCTTGCAGTC
WO         45.5%    GGCGGATGCGGCGCTCGGCA-TGAGGACTGTCG---GAGCGAGCGCCGCC

                3851        .         .         .         .     9 3900
Visser-Seq 100.0%    TATGGCACCCTCGCATTTGCTGAGATGATAAAAAAATTGCATGTCAGAGGA
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WO           45.5%    -------CCAAAGCAAAGCAGGAAACCGCACCGATTCGACCGGCGGTG--

                      3901    .         .         .         .         : 3950
Visser-Seq  100.0%    ACTCTCCTGGAAGGTAGGTGTCAAATTGATAATTTGCGTAGGTACTTCAG
WO           45.5%    CCTCTCCATGGTGGTGCGCGCCACGGGCA------GCGGCGGCA--TGAA

                      3951    .         .         .         .         0 4000
Visser-Seq  100.0%    TTTGTTGTTCTCGTCAGTACTGATGGATGCCAAC-TGGTGTTCATGCAGG
WO           45.5%    CCTCGTGTTC--GTCGGCGCCGA--GATGGCGCCCTGGA-----GCAAC

                      4001    .         .         .         .         : 4050
Visser-Seq  100.0%    AACCTGCCAAGAAATGGGAGACATTGCTATTGGGCTTAGGAGCTTC--TG
WO           45.5%    A--CTGGC--GGCCTCGGCGACGTC-CTCGGGGGGCCTCCCCGCCGCCATG

                      4051    .         .         .         .         1 4100
Visser-Seq  100.0%    GCAGTGAACC--CGGTGTTGAAGGGGAAGAAATCGCTCCACTTGCCAAGG
WO           45.5%    GCCGTAAGCTTGCGCCACTGCCTTCTTATAAATGTTTCTTCCTGC--AGC

                      4101    .         .         .         .         : 4150
Visser-Seq  100.0%    AAAATGTAGCCACTCCCTAAATGAGCTTTGGTTATCCTTGTTTCAACAAT
WO           45.5%    CAT-----GCCTGCCGTTACAACGGGTGCCGTG-TCCGTG---CAGGCCA

                      4151    .         .         .         .         2 4200
Visser-Seq  100.0%    AAGATCATTAAGCAAACGT-ATTTACTAGCGAACTATGTAGAACCCTATT
WO           45.5%    ACGGTCACCGGGTCATGGTCATCTCCCCGCG--CTACGACCAGTACAAGG

                      4201    .         .         .         .         : 4250
Visser-Seq  100.0%    ATC---GGGTCTCAA---TCATCTACAAATGATTGGTTTTTGCTGGGGA
WO           45.5%    ACGCCTGGGACACCAGCGTCATCTCCGA------GGTATAT------A

                      4251    .         .         .         .         3 4300
Visser-Seq  100.0%    GCAGCAGCAT--ATTAGGCTGTAAAATC-CTGGTTAATGATTTTGTAGGT
WO           45.5%    TCCGCCACATGAATTA---TCACAATTCACATGCTCCTGCACATTTCTGC

                      4301    .         .         .         .         : 4350
Visser-Seq  100.0%    AAGGGCTATTTAAGGTTGTGTGGATCAAAGTCAATAGAAAATAGTTATTA
WO           45.5%    AAGA-CT-TTACTGACTGGCTGGATC----TCGC-AGATCAAGGT-----

                      4351    .         .         .         .         4 4400
Visser-Seq  100.0%    CTAACGTTTGCAACTAAATACTTAGTAATGTAGCATAAATAATACTAGTA
WO           45.5%    ----CGTTGACAGGTACG-AGAGGGTGAGGTACTTCCACTGCTACAAGCG

                      4401    .         .         .         .         : 4450
Visser-Seq  100.0%    GCTAATATATATGCGTGAATTTGTTGTACCTTTTCTTGCATAATTATTTG
WO           45.5%    CGGGGGTGGACC-GCGTG--TTCGTCG-AC--------------------

                      4451    .         .         .         .         5 4500
Visser-Seq  100.0%    CAGTACATATATAATGAAAATTACCCAAGGAATCAATGTTTCTTGCTCCG
WO           45.5%    --------------------------------------------------

                      4501    .         .         .         .         : 4550
Visser-Seq  100.0%    TCCTCCTTTGATGATTTTTTACTCAATGCAGAGCTAGTGTGTTAAGTTAT
WO           45.5%    --------------------------------------------------

                      4551    .         .         .         .         6 4600
Visser-Seq  100.0%    AAATTTTGTTTAAAAGAAGTAATCAATTTCAAATTAGTTGGTTGGTCATA
WO           45.5%    --------------------------------------------------

                      4601    .         .         .         .         : 4650
Visser-Seq  100.0%    TGAAAGAAGCTGGCAGGCTAACTTTGAGGAGATGGCTATTGAATTTCAAA
WO           45.5%    --------------------------------------------------

                      4651    .         .         .         .         7 4700
Visser-Seq  100.0%    GTGATTATGTGAAAACAATGCAACATTTATGTCAATCAACACTTAAATTA
WO           45.5%    --------------------------------------------------

                      4701    .         .         .         .         : 4750
Visser-Seq  100.0%    TTGCATTTAGAAAGATATTTTTTGAGCCCACGACACATTCATTCATAAAGT
WO           45.5%    --------------------------------------------------
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                         4751        ]  4757
Visser-Seq 100.0%       AAGGTAG
WO          45.5%       - - - - - - -
```